

UR an international PhD student

A COURSE SYLLABUS – DOCTORAL SCHOOL

Public lecture/workshop

GENERAL INFORMATION ABOUT COURSE	
Course title	The tax identity of artificial intelligence
Name of the unit running the course	Doctoral School at the University of Rzeszów
Type of course (<i>obligatory, optional</i>)	optional
Year and semester of studies	interdisciplinary
Discipline	_____
Language of Course	english
Name of Course coordinator	Prof. Dr. Mehmet Alpertunga Avci
Name of Course lecturer	Prof. Dr. Mehmet Alpertunga Avci
Prerequisites	_____
BRIEF DESCRIPTION OF COURSE	
(100-200 words)	
<p>Taxes are the primary source of revenue for modern states to provide essential public services. Taxation involves a hierarchical debt-credit relationship between the state and taxpayers. It is crucial for this relationship's smooth and systematic functioning that the state can promptly access the revenue sources it needs to provide public services without interruption. Therefore, it is essential to adapt developing technologies to tax law, tax systems, tax disputes, and tax judgment. Artificial intelligence (AI) has tremendous potential in establishing and maintaining effective taxation relationships and processes. In the international literature, technology adaptation to taxation is referred to as LegalTech. However, the position of AI as a tax subject in terms of tax liability, taxation potential, income generation, wealth acquisition, and expenditure realization is an important question that needs to be answered. The central question is how AI will be positioned in the taxation relationship. This course delves into the complex framework of Artificial Intelligence (AI) and the potential benefits and risks it poses for tax-related matters. By exploring the fundamental concepts of AI, examining essential elements of taxation, and scrutinizing taxation principles, this course aims to understand the interplay between AI and taxation thoroughly.</p>	

COURSE LEARNING OUTCOMES AND METHODS OF EVALUATING LEARNING OUTCOMES				
Learning outcome	The description of the learning outcome defined for the course	Relation to the degree programme outcomes (symbol)	Learning Format (Lectures, classes,...)	Method of assessment of learning outcomes (e.g. test, oral exam, written exam, project,...)
Knowledge (no.)	(Knows and understands)			
1	Is familiar with the general issues relating to artificial intelligence	P8S_WG1	classes	discussion
2	Is familiar with general concepts related to the topic of artificial intelligence and tax identity	P8S_WG2	classes	discussion
3	Is familiar with scientific research methodology	P8S_WG3	classes	discussion
4	Is familiar with the global dilemmas of artificial intelligence	P8S_WK1	classes	discussion
Skills (no.)	(Able to)			
1	Able to define the purpose of the research, formulate hypotheses and make inferences from the research	P8S_UW1	classes	discussion
2	Able to use scientific literature to solve a research problem	P8S_UW2	classes	discussion
3	Able to use critically analyse and evaluate research results	P8S_UW3	classes	discussion
4	Able to use a modern language to the extent necessary to participate in scientific research	P8S_UK6	classes	discussion

Social competence (no.)	(Ready to)					
1	Is ready to recognise public ownership of the results of scientific activities	P8S_KK1	classes	discussion		
LEARNING FORMAT – NUMBER OF HOURS						
Semester (no.)	Lectures	Seminars	Lab classes/workshop	Internships	others	ECTS
—	—	—	10	—	—	—
METHODS OF INSTRUCTION						
Lectures, discussion, presentations						
COURSE CONTENT						
<ul style="list-style-type: none"> - Main components and related technologies of AI - Definition TaxTech - Definition and analyses of tax - AI and tax interaction. - Utilizing AI to reinterpret principles of taxation: with country practices - AI-related on taxation, tax law, and tax system - AI and tax law: emerging challenges and opportunities 						
COURSE ASSESSMENT CRITERIA						
Activity PhD students during discussion						
TOTAL PhD STUDENT WORKLOAD REQUIRED TO ACHIEVE THE INTENDED LEARNING OUTCOMES – NUMBER OF HOURS AND ECTS CREDITS						
Activity			Number of hours			
Scheduled course contact hours			10			
Other contact hours involving the teacher (consultation hours, examinations)			0			
Non-contact hours – student`s own work (preparation for classes or examinations, project, etc.)			0			
Total number of hours			10			

Total number of ECTS credits	_____
INSTRUCTIONAL MATERIALS	
Compulsory literature:	<p>Alessia Fidelangeli & Federico Galli (2021). <i>Artificial Intelligence and Tax Law</i>.</p> <p>Andre Ippolito & Augusto Cezar Garcia Lozano (2020). "Tax Crime Prediction with Machine Learning: A Case Study in the Municipality of Sao Paulo". <i>Proceedings of the 22nd International Conference on Enterprise Information Systems (ICEIS)</i>. 452-459.</p> <p>Antonio Faúndez-Ugalde, Rafael Mellado-Silvab, Eduardo Aldunate-Lizanaa (2020). "Use of Artificial Intelligence by Tax Administrations: An Analysis Regarding Taxpayers' Rights in Latin American Countries". <i>Computer Law & Security Review</i>. 1-13.</p> <p>Caroline Bruckner & Collin Coil (2024). <i>AI and the Modern Tax Agency: Adopting and Deploying AI to Improve Tax Administration</i>. IBM Center for The Business of Government.</p> <p>Cas Milner & Dr. Bjarne Berg (2020). <i>Tax Analytics Artificial Intelligence and Machine Learning–Level 5</i>. PwC Advanced Tax Analytics & Innovation.</p> <p>Deloitte Touche Tohmatsu Limited (2018). <i>16 Artificial Intelligence projects from Deloitte</i>.</p> <p>Janet Holtzblatt & Alex Engler (2022). <i>Machine Learning and Tax Enforcement</i>. Tax Policy Center-Urban Institute & Brookings Institution.</p> <p>Jay A. Soled & Kathleen DeLaney Thomas (2023). <i>AI, Taxation, and Valuation</i>. Iowa Law Review. 651-701.</p> <p>Jeffrey Owens, Ivan Lazarov & Nathalia Oliveira Costa (2021). <i>Exploring The Opportunities and Challenges of New Technologies for EU Tax Administration And Policy</i>. European Parliament.</p> <p>Lingyan Zhou (2019). "Opportunities and Challenges of Artificial Intelligence in the Application of Taxation System". <i>Advances in Economics, Business and Management Research</i>. 201-206.</p> <p>Marcin Szczepański (2019). <i>Economic Impacts of Artificial Intelligence</i>. EPRS-European Parliamentary Research Service.</p> <p>Mohammad Hassan Shakil and Mashiyat Tasnia (2022). "Artificial Intelligence and Tax Administration in Asia and the Pacific". In. <i>Taxation in the Digital Economy</i>. Routledge: London. pp. 45-55.</p> <p>Parthasarathi Shome (2022). "Taxation of Robots". <i>ADB</i>.</p> <p>Raúl Félix Junquera-Varela, Cristian Óliver Lucas-Mas, Ivan Krsul, Vladimir Calderon & Paola Arce (2022). <i>Digital Transformation of Tax and Customs Administrations</i>. World Bank Group.</p> <p>Vikram Chand, Svetislav Kostić & Ariene Reis (2020). "Taxing Artificial Intelligence and Robots: Critical Assessment of Potential Policy Solutions and Recommendation for Alternative Approaches – Sovereign Measure: Education Taxes/Global Measure: Global Education Tax or Planetary Tax". <i>World Tax Journal</i>. 711-761.</p> <p>Vincent Ooi & Glendon Goh (2022). "Taxation of Automation and Artificial Intelligence as a Tool of Labour Policy". <i>eJournal of Tax Research</i>. 273-303.</p>

	Zhuowen Huang (2018). "Discussion on the Development of Artificial Intelligence in Taxation". <i>American Journal of Industrial and Business Management</i> . 1817-1824.
Complementary literature:	_____

